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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,100	01/24/2005	Hidehiko Inokuchi	5077-232/NP	1928

27572 7590 10/18/2007

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EXAMINER	
AL HASHIMI, SARAH	
ART UNIT	**PAPER NUMBER**
2853	
MAIL DATE	**DELIVERY MODE**
10/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/522,100	INOKUCHI ET AL.	
	Examiner	Art Unit	
	Sarah Al-Hashimi	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07/24/2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) *23-42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,13-15 and 20-22* is/are rejected.

7)☒ Claim(s) *9-12,16-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claim 1,3-5,13-15,20-22** are rejected under 35 U.S.C. 102(b) as being anticipated by Inokuchi (US 2003/0151653).

Inokuchi teaches:

Claim 1: a substantially rectangular parallelepiped casing whose vertical length is shorter than lateral and anteroposterior lengths thereof (fig 1);

an ink-jet recording head provided inside of the casing (fig 4 #18);

a tray which is arranged under the recording head inside of the casing and supports a recording medium on which recording is performed by the recording head (fig 4 #10 and #11);

a moving mechanism moving the tray in the casing anteroposterior direction so that the tray passes through a position under the recording head (para 83 "the recording sheet P is located in a region within the sheet feeding cassette 10, which is surrounded by a reference position (a plate member formed parallel to the transporting direction) 10d closer to a surface 10c of the sheet feeding cassette 10 (in other words, this side as viewed in the depth direction (direction C) of the sheet feeding cassette 11), a fixed wall

member 10g, and movable partitioning plates 10e and 10f"; the movable partitioning plates indicate a moving mechanism moving the tray); and

a power supply substrate arranged above the tray inside of the casing, so as to overlap with the tray when viewed from above (para 139 "a space through which the recording sheet P (sheet feeding cassette 10) is inserted and drawn out at least partially overlaps with the cap part 40a" and (para 62 "the motor part 40d may be used as a power source"; the motor is in the same vicinity as the cap and therefore overlaps #10).

Claim 3: a carriage shaft extending in a casing lateral direction inside of the casing (fig 4 #20);

a chassis supporting both ends of the carriage shaft (fig 4 #19 serves as a chassis);

a carriage which holds the recording head, reciprocates along the carriage shaft in the casing lateral direction, and has a home position at any one of the ends of the carriage shaft (fig 4 #19); and

a control substrate provided vertically in a direction perpendicular to the carriage shaft at a position outside of the chassis on the opposite side of the home position in the casing lateral direction inside of the casing (fig 4 #29).

Claim 4: a protruded part which is protruded rearward is formed in a back surface of the casing (fig 4 #14j is in front of protruded back surface of #14); and external connection terminals are provided in a part other than the protruded part in the back surface of the casing (para 43 "it is preferable that connection terminals to PC or STB is also provided on the front surface 14a since the operability is improved").

Claim 5: a protruded part which is protruded rearward is formed in a back surface of the casing (fig 4 #14j is in front of protruded back surface of #14); and external connection terminal are provided in a part other than the protruded part in the back surface of the casing casing (para 43 "it is preferable that connection terminals to PC or STB is also provided on the front surface 14a since the operability is improved").

Claim 13: the supply cassette is a cassette whose length in the casing anteroposterior direction is longer than an anteroposterior length of a casing side surface, and which extends rearward beyond a rear end of the casing side surface (fig 4 #10);

a protruded part which is protruded rearward is formed in a back surface of the casing (fig 4 #14j is in front of protruded back surface of #14); and

the protruded part of the casing covers the rear end part of the supply cassette extending rearward beyond the rear end of the casing side surface (fig 4).

Claim 14: a substantially rectangular parallelepiped casing whose vertical length is shorter than lateral and anteroposterior lengths thereof (fig 1);

a carriage shaft extending in the casing lateral direction inside of the casing (fig 4 #20);

a chassis supporting both ends of the carriage shaft (fig 4 #19 serves as a chassis);

a carriage which reciprocates along the carriage shaft in the casing lateral direction and has a home position at any one of the ends of the carriage shaft (fig 4 #19);

an ink-jet recording head attached to the carriage (fig 4 #18); and

a control substrate provided vertically in a direction perpendicular to the carriage shaft at a position outside of the chassis on the opposite side of the home position in the casing lateral direction inside of the casing (fig 4#29).

Claim 15: a protruded part which is protruded rearward is formed in a back surface of the casing (fig 4 #14j is in front of protruded back surface of #14); and

external connection terminals are provided in a part other than the protruded part in the back surface of the casing (para 43 "it is preferable that connection terminals to PC or STB is also provided on the front surface 14a since the operability is improved").

Claim 20: the supply cassette is a cassette whose length in the casing anteroposterior direction is longer than an anteroposterior length of a casing side surface, and which extends rearward beyond a rear end of the casing side surface (fig 4 #10); and

the protruded part of the casing covers the rear end part of the supply cassette extending rearward beyond the rear end of the casing side surface (fig 4).

Claim 21: a substantially rectangular parallelepiped casing whose vertical length is shorterthan lateral and anteroposterior lengths thereof (fig 1);

an ink-jet recording head provided inside of the casing (fig 4 #18);

a supply cassette which is arranged under the recording head inside of the casing and houses a recording medium on which recording is performed by the recording head (fig 4 #10); and

a conveying mechanism conveying the recording medium housed in the supply cassette to a recording position where the recording is performed by the recording head (fig 4 #26),

wherein a protruded part which is protruded rearward is formed in a back surface of the casing (fig 4 #14j is in front of protruded back surface of #14); and external connection terminals are provided in a part other than the protruded part in the back surface of the casing (para 43 "it is preferable that connection terminals to PC or STB is also provided on the front surface 14a since the operability is improved").

Claim 22: the supply cassette is a cassette whose length in the casing anteroposterior direction is longer than an anteroposterior length of a casing side surface, and which extends rearward beyond a rear end of the casing side surface (fig 4 #10); and the protruded part of the casing covers the rear end part of the supply cassette extending rearward beyond the rear end of the casing side surface (fig 4).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Inokuchi (US 2003/0151653) in view of Okawa US 20010005459.

Inokuchi teaches:

Claim 2: a conveying mechanism conveying the recording medium housed in the supply cassette to a recording position where the recording is performed by the recording head (fig 4 #26).

Inokuchi does not teach:

Claim 2: a supply cassette which is arranged under the tray inside of the casing and houses a recording medium *different* from the recording medium supported by the tray.

Okawa teaches:

Claim 2: a supply cassette which is arranged under the tray inside of the casing and houses a recording medium *different* from the recording medium supported by the tray (fig 1 #21 and #71 beneath #21, #71 houses OHP and para 30 indicates that the tray can hold papers or transparencies—"a recording medium such as an ordinary (or common) sheet").

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Inokuchi to incorporate a supply cassette which is arranged under the tray inside of the casing and houses a recording medium different from the recording medium supported by the tray as taught by Okawa in order to allow versatility in the mediums used for imaging.

5. **Claims 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Inokuchi (US 2003/0151653) in view of Sasaki (US 6,583,802).

Inokuchi does not teach:

Claim 6: *a fan* sending air to the recording medium after recording onto the recording medium supported by the tray.

Claim 7: *a heat source* heating the air sent by the fan.

Claim 8: *a cooling fan* of the power supply substrate sending air to the recording medium after recording onto the recording medium supported by the paper tray.

Sasaki teaches:

Claim 6: *a fan* sending air to the recording medium after recording onto the recording medium supported by the tray (fig 1 #65).

Claim 7: *a heat source* heating the air sent by the fan (col 2 lines 44-5 "the thermal head pressurizes and heats the recording material").

Claim 8: *a cooling fan* of the power supply substrate sending air to the recording medium after recording onto the recording medium supported by the paper tray (fig 1 #65).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Inokuchi to incorporate a heat source heating the air sent by the fan and a cooling fan of the power supply substrate sending air to the recording medium after recording onto the recording medium supported by the paper tray as taught by Sasaki because the fan prevents overheating in the printer that can deteriorate image quality.

Allowable Subject Matter

6. **Claims 9-12** and **16-19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claims 9-10 and 16-17 is the inclusion of the limitation of an ink-jet recording device that includes the control substrate has a plurality of external connection terminals in line vertically; and in the casing, an opening for connection to the external connection terminals is formed. It is this limitation found in

claims 9 and 16, as it is claimed in the combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 11-12 and 18-19 is the inclusion of the limitation of an ink-jet recording device that includes the control substrate has a plurality of internal connection terminals arranged in an upper part of the control substrate. It is this limitation found in claims 11 and 18, as it is claimed in the combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Response to Arguments

7. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,296,407 discloses a printer with a moveable tray.

US 2001/0017644 a printer including external connection terminals.

US 2005/0146591 is a printer including a casing and power supply resembling the current applicants structure.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Al-Hashimi whose telephone number is 571 272 7159. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272 2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SA/

STEPHEN MEIER
SUPERVISORY PATENT EXAMINER